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Vol. 5 No. 2

The Enterprise Market



ISCe 2007

June 5-7, 2007 • San Diego Hilton Resort at Mission Bay, San Diego, California

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NOTE FROM THE EDITOR

Interference from WiMax



As with any technology that uses the radiofrequency spectrum, satellites are not immune from interference from other services using other frequencies, or in some cases the same frequency. This year the International Telecommunications Union (ITU), which regulates the use of the radiofrequency spectrum, will be holding its World Radio-communications Conference in October. One of the key issues on the agenda to be decided is whether they will allow terrestrial mobile networks (such as WiMax) the use of the 3.4-4.2 GHz frequency range, previously reserved for satellites. This frequency range is called C-Band by satellite operators and is used by the majority of transponders in the geostationary arc for broadcast, telecom and other applications. The implications of potential interference from WiMax and other terrestrial sources to C-Band satellite transmissions are far-reaching and potentially catastrophic. That's why industry organizations such as the Global VSAT Forum, the Cable and Satellite Broadcasting Association of Asia and even individual satellite companies up in arms on this issue.

Curiously, even the WiMax industry group, the WiMax Forum, admitted that it would be difficult to implement the sharing of the C-Band spectrum with satellite operators due to the prohibitive cost of retrofitting thousands of C-Band satellite dishes now in operation.

This issue, seems like a no brainer, but there is no predicting how individual governments and ITU representatives will vote on this important issue. So industry organizations and companies such as SES News Skies have launched a concerted letter-writing and lobbying campaign to ensure that the concerned people are well-informed on the issue and will not allow any sharing of the C-Band spectrum.

Virgil Labrador

Article Contributions to SatMagazine

Satmagazine accepts article contributions from the industry. We encourage contributions that deal with issues affecting the industry as opposed to company or product-specific articles. We are specifically interested in case studies, opinion (op-ed) pieces, features or market studies and trends. To submit proposals for possible articles, send a one-paragraph or less abstract of the proposed article or to obtain more information on our editorial calendar, publishing guidelines and deadlines, please send an e-mail to virgil@satnews.com

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Calendar of Events 2007

May 15-17, Asia Pacific Forum on Telecom Policy and Regulation/ Asia-Pacific Telecommunity
Kuala Lumpur, Malaysia Tel:+662-573-0044
meeting@apt.int
<http://www.apt.int/meetings/2007/PRF/default.htm>

May 15-16, IPTV World Forum Eastern Europe
Prague, CZECHOSLOVAKIA
Ingrid Anusic
Tel: +44 1173 116 220 / Fax: +44 1173 116 221
E-mail: ingrida@junction-group.com
<http://www.iptv-easterneurope.com>

May 17-18, Building the Broadband Economy:
The Intelligent Community Forum's annual conference
Polytechnic University, New York City
Louis Zacharilla, Co-Founder
+1-646-291-6166 (x102) or +1-212-249-0624
Fax: 212-825-0075
Rbarney@intelligentcommunity.org
<http://www.intelligentcommunity.org>

May 21-23, 2007, IDGA's Military Satellites 2007
Arlington, VA
Dave Barlow@idga.org
416.597.4710
<http://www.idga.org/us/milsat>

May 21-23, Mobile Satellite Users Association
International Conference and Exhibition Baltimore,
MD, USA
Tara Blair / Betsy Kulick
Tel: 1-757-747-2342
E-mail: enp@ecius.net / <http://www.msua.org/msua4>

May 25-28, International Space Development
Conference 2007 Dallas, Texas
Brett Silcox
Tel: (202) 429-1600
E-mail: brett.silcox@nss.org
<http://www.isdc2007.org>

May 29-31, 2nd Annual Conference: Oil and Gas
Communications: North Africa and the
Middle East Cairo, Egypt
Email: martin.jarrold@gvf.org

Jun. 5-7 ISCe 2007: Satellite and Hybrid Network
Solutions for the Entertainment and Military/
Government Markets
San Diego Hilton Resort at
Mission Bay, San Diego, California
David Bross
Tel: +1.301.916.2236
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Jun. 11-12, Mobile TV World Forum, Prague,
CZECHOSLOVAKIA
Ingrid Anusic
Tel: +44 1173 116 220
Fax: +44 1173 116 221
E-mail: ingrida@junction-group.com
<http://www.mobiletv-forum.com>

Jun. 14-16, 3rd International Conference on recent
Advances in Space Technologies Istanbul, TURKEY
Tel: +90-212-6632490, Ext. 4365
Fax: +90-212-6628551
E-mail: rast2007@rast.org.tr
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FEATURED EVENT

ISCe 2007: A Must Attend Event in the West Coast



ISCe Conference and Expo 2007

June 5-7, 2007, San Diego Hilton Resort at Mission Bay, California

The sixth annual ISCe 2007 Conference and Expo to be held from June 5-7 in San Diego, California is a must-attend event for the satellite industry. "This year ISCe's 'gone vertical.' said ISCe Chairman David Bross. " We have streamlined the program into three full days (rather than 3-1/2 days) and focused each day on a particular vertical market. We also have trimmed the exhibition to two days and focused much more time in the program on exhibit-only opportunities," he added.

One new feature of the program is a "Navy Satcom Users Workshop" to be hosted by the U.S. Navy PEO C4I and the Satellite Industry Association (SIA). The Workshop to be held on the second day, will feature discussion on use of satellite technology over the oceans.

On Day One (June 5) the World Teleport Association (WTA) and Global VSAT Forum (GVF) are coming together to produce, a day-long track of sessions titled: 'Profiting from Hybrid Solutions: How Satellite Users and Service Providers Integrate Satellite Into Fixed, Mobile and Wireless Communications.' These sessions will provide the attendee with a high-level exploration of opportunities, discuss technical challenges and how they are overcome and offer case studies of field-proven applications in Satcoms.

On Day Two (June 6) ISCe is, again, presenting—in conjunction with The Carmel Group—the 12th Annual Five Burning Questions Seminar along with the Cable, Satellite & Telco Entertainment Forum. This day is designed specifically for those companies that do business in the profitable worlds of consumer services, SME and SoHo markets and in broadband communications of all types. "All of the content on this day will be exclusive to this marketplace segment, hence the vertical nature of the program, and will feature many more general sessions," said Bross.

Finally, on Day Three (June 7) ISCe will present its annual Military & Government Requirements Forum. This is the largest one-day forum on the West Coast dedicated solely to the

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interplay between the commercial communications satellite industry and the military. As with the program on Day Two, this is day is organized for those companies that do business with the Defense Department, U.S. and foreign governments and the First Responder Community. "The day will feature keynotes with from top military leaders, exclusive general sessions and a streamlined program which promises direct access to the movers and shakers in this field. This is an ISCe signature program," said Bross.

"Whether you are an executive from the satellite industry, cable TV business, a content provider, equipment manufacturer, end user of services or a competitor (cable TV or telco

executive), ISCe 2007 is the meeting place to gain the competitive intelligence on where the converged, hybrid telecoms marketplace is headed in a relaxed atmosphere filled with

networking opportunities, a world-class exhibition and a must-attend program. There is no other event like this in the United States," added Art Paredes, Chairman of ISCe organizer, Hannover Fairs, USA.

"ISCe is an intimate, vertically-integrated show that provides senior executives access to the highest-level executives in the marketplace along with unequalled social and networking opportunities via the conference program, bustling exhibition, SSPI Beach Blast (now in its second year) and the signature ISCe Awards Dinner Program and International Reception," concluded Bross.

For more information on ISCe 2007 Conference and Expo contact the Conference Chairman, David Bross at +1-301-916-2236 or e-mail at: dbross@hfusa.com or go to www.isce.com **SM**

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FEATURED EVENT



ISCE 2007 CONFERENCE Schedule at a Glance

For the full conference program go to www.isce.com/conference_program

Tuesday, June 5

WTA/GVF Workshop: Profiting from Hybrid Solutions: How Satellite Users and Service Providers Integrate Satellite into Fixed, Mobile and Wireless Communications Forum Day 1

10:30–10:40 am	Welcome Remarks
10:40 am–12:00 pm	IP and the Hybrid Solutions Opportunity
12:00–1:30 pm	Luncheon Program
1:40–3:00 pm	Hybrid Solutions for Mobility
3:00–4:15 pm	Hybrid Solutions for Off-Net Locations
4:15–4:30 pm	Refreshment Break
4:30–5:30 pm	Hybrid Solutions for Multicasting
5:30 pm	Closing Remarks
6:00–7:30 pm	SSPI Beach Blast and ISCe 2007 Welcome Reception

Wednesday, June 6

Cable, Satellite & Telco Entertainment Forum

7:15–8:15 am	VIP and Speaker Breakfast
8:30–10:00 am	SIA “State of the Industry” Report Welcome and Keynote Address: TBA
10:00–11:30 am	Telecom Leaders Speak: Bringing the Internet, Telcos, Cable and Satellite Together
11:30 am–12:30 pm	Coffee Break in Exhibit Hall
12:30–2:00 pm	International Welcome Luncheon Speaker: the Hon. Susan Schwab, U.S. Trade Representative
2:00–3:15 pm	Upstart Techies, Cable, Satellite and The Telcos: Where Are Cisco, Google, Yahoo and Ebay? IPTV: The Entertainment and Commercial Focus

3:15–4:30 pm
Refreshment Break in Exhibit Hall

4:30–6:00 pm
Hollywood, Satellite, Cable and The Telcos: Linking Disney, Warner Bros., Sony, Paramount, Fox and Universal
Mobile Content: Entertainment and Commercial

6:30–7:30 pm
ISCe Awards Reception

7:30–10:00 pm
ISCe 2007 Awards Dinner

10:00 am–5:00 pm
Exhibit Hall Open

Thursday, June 7

Military & Government Requirements Forum

7:45–8:45 am	VIP and Speaker Breakfast
9:00–10:00 am	Futron Corp. ISCe 2007 Survey Results Welcome and Military Keynote Address Speaker: Rear Adm. Michael C. Bachmann, SPAWAR Commander
10:00–11:30 am	Transitional Communications Architecture – Anywhere and Any Time – Maybe!
11:30 am–12:30 pm	Coffee Break in Exhibit Hall
12:30–2:00 pm	Leadership Luncheon Keynote Speaker: Robert Joseph, Under Secretary for Arms Control and International Security
2:00–3:15 pm	Homeland Security/First Responders Technology Update: Helping Those Who Help Intelligence and Communications – You Can’t Have One Without The Other!
3:15–4:30 pm	Refreshment Break in Exhibit Hall
4:30–5:30 pm	Technology and the Long War Against Terrorism – Looking for Answers Transformational Satellite Communications Mission Operations System
10:00 am–5:00 pm	Exhibit Hall Open

INDUSTRY NEWS

Private Equity Firm Blackstone Sets Sights on Intelsat



Intelsat CEO

David McGlade.

NEW YORK - New York-based private equity firm The Blackstone Group LP, which bought satellite operator New Skies Satellites N.V. in 2004 for \$956 million in cash, is reported to have triggered what could become a bidding war for Intelsat, Ltd, offering \$6 billion to buy the world's largest commercial satellite operator.

Reports are rife in world financial circles and media that the four private equity firms that took control of Intelsat in 2004 for \$3.1 billion are determined to part with their prized investment for a hefty profit. A Bloomberg report cites two unnamed sources close to the deal as the source of the Blackstone bid. Should they accept Blackstone's offer, Madison Dearborn Partners Llc, Apax Partners Worldwide LLP, Permira Advisers LLP and Apollo Management LP, stand to make over 10 times the \$515 million in cash they paid for Intelsat in 2004.

Each also bought a 25 percent stake in Intelsat, valuing the equity at some \$3.1 billion. They also agreed to refinance Intelsat's \$2 billion debt. Currently, Intelsat has a long-term debt load of \$11 billion, which the new owner will absorb. Intelsat has reportedly hired Credit Suisse to seek other potential buyers, according to various media reports..

A few months after the change in ownership, Intelsat bought rival PanAmSat Holding Corporation for \$3.2 billion, creating the world's largest commercial satellite operator with 51 satellites. Luxembourg-based SES Global SA, the second largest satellite operator, has 43 satellites.

Commercial satellite operators are favorite targets for private equity firms since they generate long-term cash flows from broadcasters and governments.

Intelsat issued a statement at the NAB show in Las Vegas saying that "our company policy is not to comment on market rumors and on potential strategic or capital market activities." Blackstone and the four equity partners have refused to confirm or deny the planned sale.

Reporting on the company's operating results for 2006, CEO David McGlade reported Intelsat revenues of \$1.7 billion, a rise \$491.2 million, or 42 percent year-on-year. Intelsat's PanAmSat

business, acquired in July 2006, contributed some \$456.7 to the revenue increase, including \$37.0 million for the operations of the government business of G2 Satellite Solutions Corporation.

Intelsat, however, took a net loss of \$368.7 million in 2006. The net loss reflected the impact of an asset impairment charge of \$49.0 million to write down the net book value of one of the company's satellites that experienced an anomaly in September 2006. It also reflected the impact of restructuring costs of \$26.5 million related to the PanAmSat acquisition.

Anik F3 Launch Successful



BAIKONUR COSMODROME - Telesat Canada's Anik F3 satellite was successfully placed into orbit by an International Launch Services (ILS) Proton Breeze M launcher, the 40th successful mission for ILS. Including Anik F3, Proton has carried out 325 missions for the Russian government and commercial customers in over 40 years.

The three-stage Proton launcher climbed through the atmosphere for nearly 10 minutes before sending the Breeze M upper stage and its satellite payload on to continue the nine hour mission. This was the fourth ILS Proton launch for Telesat. ILS also launched Telesat's Anik F1R in 2005, Nimiq 1 in 1999 and Nimiq 2 in 2002.

Anik F3, built by EADS Astrium, is to add to telecommunications service in North America and to supplement Anik F2 services. It is expected to provide service for direct-to-home television (DTH) in the United States, broadband Internet services and telecommunications for Bell Canada and other BCE, Inc. companies. Anik F3, a 4,634-kilogram broadcasting and telecommunications satellite, will also broadcast TV signals to northern Canada and remote areas of Canada.

"We are grateful to both ILS and Astrium for their flawless execution of this important mission for Telesat," said Dan Goldberg, Telesat's president and CEO. "We deeply value our association with these two premier organizations and look forward to joining with them in Baikonur next year for the launch of our Nimiq 4 satellite."

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Anik F3 uses an Astrium Eurostar 3000 bus, and is the sixth of this model to be launched by Proton. The Nimiq 4 spacecraft also is a Eurostar 3000. ILS has also launched two Eurostar 2000 models.

Google Takes Aim at TV Advertising



Dr. Eric Schmidt,
Google CEO.
(Google photo)

MOUNTAIN VIEW, CA - Search engine giant Google, Inc. sees TV as becoming more like the Internet and has taken a huge first step in its attempt to take the lead in offline advertising.

In partnership with satellite TV firm EchoStar Communications Corporation, Google will sell commercials for

the TV network based on a system similar to its hugely popular AdWords and AdSense programs that allows businesses to advertise on web pages on a pay-per-click basis. Google and EchoStar said they were introducing the first automated system for buying, selling, delivering and measuring TV ads on EchoStar Dish Network's 125 national satellite programming networks. The agreement is the first of its kind for a national pay-TV provider and Google.

Google will deliver advertising to 13 million DishTV subscribers through a new TV advertising system that works along the same lines as AdWords. Analysts said Google's foray into the tough world of TV advertising underlines its ambition to become a leader in providing advertising for the Internet, TV, radio, print publications and other media.

With Google's automated online system, marketers can upload their ads and target an audience by choosing shows that match

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the demographic group they want to reach. They can also select the time of day or region in which the ads run. Google is betting its advertising innovations will enable it to become a force to contend with in offline advertising.

Google has made deals in recent months with radio broadcasters and major newspaper publishers in a bid to widen its reach in the offline world outside the Internet. The pickings are richer in TV advertising than they are on the Internet: the former is a \$70 billion a year market as against the \$17 billion Internet advertising market. Google earns some \$5 billion yearly from AdWords and AdSense.

“Dish Network is focused on improving all aspects of our business, and advertising is no exception,” said Charlie Ergen, EchoStar chief executive officer. “Through this groundbreaking partnership with Google, we are confident we will be able to bring increased efficiencies to Dish Network’s advertising sales and more accurate, up-to-date viewer measurement with easily accessible online reporting to advertisers.”

BT Continues Americas Expansion

LONDON - The acquisition by BT Group plc of Comsat International, Inc. and its established network in South America expands the group’s ever widening presence in the Americas. It follows by a scant two months BT’s acquisition of International Network Services, Inc. (INS), a provider of IT consulting and software solutions in the USA.

The INS acquisition increases BT’s presence in North America—a long sought BT objective—and is also expected to significantly enhance BT’s consulting capabilities. Analysts said acquiring Comsat complements INS while strengthening BT’s regional presence and global reach.

Comsat International has a track record in the delivery of complex projects and the management of network solutions for enterprise, public sector and carrier customers. It has an extensive regional network and also provides customers with data center, hosting and security services.

Comsat International provides local, national and pan-regional network services and solutions for some 2,000 enterprise, government and service-provider customers over integrated terrestrial and satellite network facilities throughout Latin America. It employs over 700 professionals with deep knowledge of Latin American markets and provides services directly in 15 countries.

BT International president François Barrault said the acquisition will be an exciting milestone in the execution of the group’s strategy of well-targeted acquisitions around the world, and will strengthen BT’s position as one of the global leaders in the digital networked economy.

Europe Developing Space Missions for 2015-2025

PARIS, France - The European Space Agency said it had received a large number of enthusiastic responses from the European scientific community in answer to its call for proposals to help define ESA’s scientific programs for the period 2015-2025.

ESA said it had accepted more than 60 Letters of Intent from the European scientific community. Through these, European space-science research teams expressed their intention to submit proposals for new scientific missions and provided their preliminary concepts. The amount of responses is 50 percent more than at the previous call in October 1999.

The mission concepts range from the exploration of Jupiter and its satellite Europa, to satellites studying radiation from the Big Bang and testing theories concerning the inflation of the Universe. The concepts also include missions studying near-Earth asteroids, satellites looking for liquid water on Saturn’s moon Enceladus and spacecraft to verify the truth about gravity as one of the fundamental forces of Nature.

“These concepts will now have to be consolidated into detailed proposals and submitted to ESA by 29 June 2007,” said Sergio Volonte, head of ESA’s Science Planning and Community Coordination Office.

On June 29, ESA will receive detailed missions proposals. And from October 2007 until mid-2009, ESA’s Space Science Advisory committee and scientific working groups will assess the proposals and pre-select three ‘class-M’ missions and three ‘class-L’ missions.

Class-M missions are medium-size projects, where the costs to ESA do not exceed 300 million euros. Class-L missions are larger projects, with cost envelopes not exceeding 650 million euros.

GE Takes Control of SIH

PARIS, France - The General Electric Company has completed its split with satellite operator SES and now fully controls SES

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International Holdings Inc. (SIH) and assets that include a telecommunications satellite. GE also took its 34.1 percent share in regional satellite operator Asia Satellite Telecommunications Holdings, Ltd (AsiaSat), which is being privatized.

In February, SES reacquired the 19.5 percent stake held by GE for \$1.63 billion in assets and cash in a restructuring bid to boost earnings per share and optimize assets. Under the agreement, SES contributed certain assets and cash to SIH and exchanged shares of this company for GE's entire holding of 103,149,900 shares in SES. GE exchanged its shareholding in SES for shares in SIH, comprising assets and \$722 million in cash. The assets of SIH include the AMC-23 satellite and its related business; 100% of Satlynx; 49.5% of Bowenvale (representing a 34.1% interest in AsiaSat); 19.99% of Star One and 5.5% of Orbcomm.

GE now holds both cash and SES' 34.1% economic interest in Hong Kong-based AsiaSat. CITIC Group, AsiaSat's founding

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shareholder, continues to hold 34.8% in AsiaSat. GE and CITIC have equal voting rights in AsiaSat and through Bowenvale Ltd control 68.9% of the share capital. A number of new appointments have been made at AsiaSat following the resignation of the SES board members. The new team at AsiaSat includes Ronald Herman as deputy chairman, John Connelly, Mark Chen and Nancy Wu as non-executive directors.

Satellite Conference at the NAB 2007 Highlight Opportunities in IPTV, HDTV and Enterprise Markets



From left: David Myers, Senior Vice-President, Spacenet; Joe Amor, General Manager, Microspace Communications; Mahesh Bhawe, President, AAE Systems and Larry Taylor, ViaSat, speaking at the “How Business and Government Get Payback from Multimedia Applications” session at the Satellite and Business Theater conference at NAB.

Las Vegas, NV - The Satellite Business Technology Theater held at the Central Hall of the annual National Association of Broadcasters (NAB) Expo in Las Vegas, Nevada from April 16-19 highlighted the many opportunities for the satellite industry in the growing HDTV, IPTV and enterprise markets.

The broadcasting market, which has traditionally been one of the mainstays of the satellite services market, is undergoing revolutionary changes with the demand for high bandwidth services such as IPTV, Mobile TV and HDTV. The was the overarching theme of the NAB show this year and the Satellite Business Theater conference held in the trade show floor explored various ways in which the satellite industry can capitalize on the many opportunities in the new media environment. As one speaker put it “people want their video, anywhere, anytime and to any device.”

“Bandwidth begets bandwidth,” said David Myers, Senior Vice-President of Spacenet, emphasizing that new mobile and IP applications would only drive more demand for satellite services. Speakers at various sessions addressed many different themes including “Capturing IPTV Opportunities in Satel-

lite,” “Terrestrial Wireless Carriers Want Your Satellite Bandwidth,” “How Satellite Service Providers Can Win the Value-Added Game,” and many others.

In the session on “Business Fundamentals for Reaching Niche TV Audiences via Satellite” chaired by ATCi President Gary Hatch, he said a new paradigm has evolved for delivering content to various devices. Satellites can play a vital role in delivering this content to the consumer according to the various speakers which included Andrew Dale of the Any Dale Co.’ Emrah Ozcan , CEO of Home2US Communications and Jonathan Feldman, SVP of GlobeCast Americas. “Niches are riches,” said Andy Dale, emphasizing the need for reaching the right niche audience for a satellite delivered channel to be successful.

Satellite Market Set to Soar, Predicts Teal Group



Atlas V heavy lift launcher. (Satnews archives)

COLORADO SPRINGS, CO - Two mutually reinforcing growth cycles—one in the commercial space, the other in the military—are fortuitously coming together to create what could be the start of a robust up cycle in the commercial satellite industry.

In its new report, “Prospects for Growth in the Satellite Market,” the Teal Group said indicators seem to point to the commercial satellite industry finally exiting from the doldrums inflicted by events over a decade ago.

Teal senior space analyst Marco Caceres noted that the emerging cycle within the commercial satellite market is coinciding with an up cycle in the military satellite market, which has over 200 new-generation US military satellites valued at about \$120 billion. “Many of these military satellites have been delayed and are severely over budget, but they will be built and launched because the requirements for them exist regardless,” said Caceres.

Launches are on the rise as it investor interest in the industry. Caceres said 2006 was a year of positive change, with 107 satellites launched. **SM**

EXECUTIVE MOVES

MSV Appoints Larry Haughey, Group Vice President, Government Sector

RESTON, VA - Mobile Satellite Ventures (MSV) has appointed Larry Haughey to Group Vice President, Government Sector. In this newly created role at MSV, Haughey will lead the company's U.S. federal government sales and marketing initiatives, and the important transition from its existing government sales to its next generation platform.

Haughey, a 20-year veteran of telecommunications programs with the federal and military sectors, has been integral to an array of significant telecommunications sales initiatives to the Department of Defense (DoD), Department of State, Department of Homeland Security, Defense Information Systems Agency, GSA and other infrastructure, IT telecommunications and aerospace agencies both domestically and abroad.

"Larry brings to MSV a deep understanding of federal procurement developed over 23 years of driving successful telecommunications sales organizations across the breadth of the federal arena," said Alexander Good, vice chairman, president and CEO of MSV. "I am thrilled that Larry has joined us and will lead our existing team effort in continuing to grow and transition our existing business to meet the critical government public safety and emergency needs with our next generation satellite system."

"MSV's next generation, transparent terrestrial-satellite system will be ready for any telecommunications need of the federal government, and with Larry's arrival MSV is better prepared to meet those needs," Good said.

Travis Slocumb is Raytheon SAS Vice President for Strategy and Business Development

EL SEGUNDO, CA - Travis Slocumb III has been appointed vice president for Strategy and Business Development of Raytheon Company's (NYSE: RTN) Space and Airborne Systems (SAS) business. Slocumb reports to Jon Jones, Raytheon Company vice president and president of SAS.

Prior to joining Raytheon, Slocumb held executive positions at Science Applications International Corporation (SAIC) since 1993. Recent positions with SAIC include senior vice president,

director of Business Development, RDT&E Group vice president, and Chief Technology Officer for the same group.

Slocumb brings knowledge of key strategic areas such as innovation and technology, business development and capture, and mergers and acquisitions. He has experience working closely with DARPA, the U.S. Army, U.S. Navy, U.S. Air Force, NASA and the Department of Homeland Security.

He holds a bachelor's of science degree in mathematics from the College of William & Mary, Williamsburg, Virginia.

Raytheon SAS is a provider of sensor systems for military forces. It posted 2006 revenues of \$4.3 billion and has 12,000 employees.

Vislink Appoints Michael Payne to Group Chief Technology Officer

LAS VEGAS - Microwave Radio Communications (MRC) and parent company, UK based Vislink PLC, has appointed Michael Payne to the position of Group chief technology officer (CTO) reporting to the CEO.

With over 20 years of experience in the microwave communications industry, Payne formerly held the position of VP, marketing and business development for Microwave Radio Communications (MRC), a Vislink company. He spent the majority of his career at MRC located in Billerica, Massachusetts where prior to his last role, he held various positions including director of R/D and VP of Operations.

"We are pleased to announce the appointment of Mike to Group CTO," said Ian Scott-Gall, Vislink CEO. "Vislink's strategy is for organic growth by capitalizing on new product and technology developments and initiatives from our three industry leading companies, Link, MRC and Advent. Mike will lead these initiatives from a group perspective as well as play a key role in the group's strategic planning, utilizing his many years of experience in R/D and his cumulative industry and market knowledge."

Mike has been with MRC since 1987 when he joined as an Electrical Engineer becoming in turn R&D Director. After his 13-year career in R&D he then moved into operations as Director/VP until his most recent assignment as VP of Marketing and Business Development at MRC. Mike received his BSEE from Wentworth Institute of Technology and an MBA from Suffolk University, both located in Boston.

EXECUTIVE MOVES

Boeing Names Denson-Low Internal Governance Leader; Soodik to Retire

CHICAGO - Boeing Chairman, President and CEO Jim McNerney named Wanda Denson-Low to replace Bonnie Soodik as head of the company's Office of Internal Governance, effective May 4. Soodik will retire June 30 after a 30-year Boeing career.

Denson-Low, who leads the legal staff supporting Boeing Integrated Defense Systems (IDS), will hold the title of senior vice president, reporting to McNerney. She also will replace Soodik as a member of the company's Executive Council.

"Bonnie set Boeing on a path building an ethics and compliance program that is among industry's best," McNerney said. "She has exemplified the best in leadership as she established a new organization and set high expectations for her team and our entire company along the way.

"As we continue our journey, I am looking to Wanda to keep driving our commitment to making ethics and compliance a competitive advantage for Boeing. She is a strong, talented leader with the right background and experience to further advance our internal governance programs," he added.

As leader of the Office of Internal Governance (OIG), Denson-Low, 50, will be responsible for internal audit, ethics and business conduct, import- and export-related activities, as well as overall compliance requirements. She brings 25 years of broad functional experience in corporate law and human resources management, serving as vice president and assistant general counsel for IDS since 2003 and previously as IDS vice president of Human Resources.

Boisvert, Former Telesat CEO, Appointed President of Canadian Space Agency

OTTAWA, Canada - The Canadian federal government has appointed former Telesat Canada CEO Laurier "Larry" Boisvert the new president of the Canadian Space Agency (CSA).

He replaces former astronaut Marc Garneau, Canada's first man in space, who ran for election in the last federal election but lost.

Boisvert joined Telesat in 1972. He was appointed vice-presi-

dent of Network Services in 1998 and became president and CEO of Telesat Mobile, Inc. in 1997 while continuing his responsibilities with Telesat Canada. Boisvert was Telesat Canada CEO from 1993 to 2006, when he retired.

Boisvert is a graduate from the Carleton Honours Commerce Program and also holds a Radar Technician Certification Diploma from the Royal Canadian Air Force.

CSA was established in 1989 by the Canadian Space Agency Act. The agency operates like a government department. The president is the equivalent of a deputy minister and reports to the Minister of Industry.

As CSA president, Boisvert oversees five core functions: Space Programs, Space Technologies, Space Science, Canadian Astronaut Office, Space Operations. He also looks after six executive functions (Audit, Evaluation and Review; Corporate Management; Communications; Strategic Development; External Relations; Government Liaison) and three Corporate functions (Legal Services, Administration, and Human Resources). He is supported by the senior vice-president and the vice-president, Science, Technology and Programs.

Wegener Appoints Leffingwell Sales Director

DULUTH, GA - Wegener Corporation, a leading provider of equipment for television, audio and data distribution networks worldwide, announces the promotion of Ken Leffingwell to director of sales. Ken has been in a management role in Wegener's sales department for the last two years and will now fill the vacant position of leading the sales team.

Leffingwell has been with Wegener for the past two years, 15 years in total. Prior to his recent return to Wegener, he was DTV technologist with the Broadcast Solutions Group at Technical Innovation, where he assisted broadcasters and cable television operators in their transition to digital technologies. Earlier Ken worked for BarcoNet, Wegener Communications and Scientific-Atlanta. During this 25 year combined tenure he held positions of applications engineer, quality engineer, systems engineer, program manager, and customer services manager.

"Ken has been a steady force in the sales department," stated Robert Placek, chairman and CEO of Wegener. "He will provide strong leadership for the sales team. His nearly 30 years of experience in the broadcast and cable industry provides us with an excellent vision of our customers' needs for the future."

EXECUTIVE MOVES

Mike Bristol is Senior Vice President, TCS Government Business Group

ANNAPOLIS, MD- TeleCommunication Systems, Inc. has appointed Michael Bristol, Sr. to senior vice president of its Network Solutions Group. Bristol is responsible for overseeing the group's overall business operations, sales and marketing, and research and development efforts.

The majority of the group's current customers consist of federal, state and local government agencies. Prior to this promotion, Bristol served as vice president of the Network Solutions Group, a position he held since March 2004.

Bristol has played a significant role in building the Network Solutions Group into a leader in secure satellite-based communications and outsourced information technology services. Under his leadership, TCS was selected as one of six vendors by the U.S. Army's World-Wide Satellite Systems (WWSS) Program Management Office to participate in a five-year, \$5 billion World-Wide Satellite Systems (WWSS) Indefinite Delivery Indefinite Quantity (IDIQ) contract — the largest TCS contract ever. To date, should all option years be exercised, the total WWSS contract awards to TCS are worth more than \$33 million, with more task orders under way.

Prior to joining TCS, Bristol worked six years at Oracle Corporation, the world's largest provider of database products and

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EXECUTIVE MOVES

business applications, where he was senior director responsible for all business development activities of Oracle's Navy/Marine Corps Consulting Business. He also served nine years as vice president and COO of Infocus Communications, a privately held multimedia technology company, where he was responsible for all operating divisions. Bristol served on the Infocus Board of Directors and participated in its pre-Initial Public Offering positioning.

Bristol is an alumnus of the U.S. Military Academy at West Point, where he earned a bachelor's degree in engineering. He served as a Captain, U.S. Army Military Intelligence, managing an Information Technology support center that provided custom software development, systems integration services, documentation and maintenance.

Stratos President Named Chairman of Mobile Satellite Users Association

WASHINGTON DC - Stratos Government Services, Inc. (SGSI) president Bob Roe has been named chairman of the Mobile Satellite Users Association (MSUA), a non-profit organization that promotes the interests of Mobile Satellite Services (MSS) users worldwide.

Roe is a leading expert on government applications with 30 years of experience in the commercial and government satellite sectors, including 22 years in the U.S. Navy where he worked in the communications fields for maritime, land mobile, aviation and intelligence commands.

"The steady growth of the MSS industry has been led by impressive new technologies, as well as new applications in the military and government segments," said MSUA president Tim Farrar. "Bob Roe's deep understanding of these important markets will help us fulfill our mission to promote dialog with end users and provide them with insight into key MSS developments."

Dr. Peter Scovell is new CoB for International Datacasting

OTTAWA, Canada - International Datacasting Corporation has elected director Dr. Peter Scovell chairman of the board of directors, effective immediately. Longtime chairman Denzil Doyle resigned the post and will continue as an active director.

The announcement came after IDC's fiscal year-end board

meeting and coincides with the release of financial results for the year which highlight a third consecutive year of profitability and revenues up more than 30% over the previous year.

Doyle said IDC is a great company and found it a pleasure to serve as its chairman for the last 12 years. "The company has just finished a good year and is poised for great things. This is a good time for new leadership to help take us to the next step. I'm pleased that Peter Scovell has accepted the role of chairman. He's been an important contributor to the Board over the last few years and has the corporate experience and technology expertise we need in a chairman. For my part, I look forward to continuing to participate actively in the board as a director."

Dr. Scovell, who holds a PhD in theoretical physics, said he was pleased to accept the position of chairman of the board, and was enthusiastic about the company's accomplishments and future prospects.

"These are exciting times for technology-driven companies in the broadband wireless space and IDC is ideally positioned, at the forefront of one of the more interesting sectors with excellent growth potential. On behalf of the board of directors, the employees of IDC and my fellow shareholders, I would like to extend our sincerest gratitude to Denzil Doyle for his leadership, investment and many personal contributions over the years that he has served as chairman of the IDC Board. It is an honor to serve with him and I'm grateful we'll continue to have his wealth of experience and legendary insight on the board."

End II End Appoints Senior Advisor for India

CHARLOTTE, NC - End II End Communications has appointed Colonel (retired) Tapan Das Sharma as its senior advisor on the Indian market. Col. Sharma has 30 years of honorable military service providing leadership to regimental teams and maintenance of high-tech systems during both peace and war.

Following his retirement from active duty, he held various senior management and operational positions including general manager at Narang Industries & Sugar Mills and as vice president, Security and Intelligence Services, India Ltd. He is currently chairman and managing director of Bravehearts Security and Intelligent Services, a private company sponsored by India's Ministry of Defense.

Known for his ability to create and articulate corporate vision

EXECUTIVE MOVES

and for customer-centric leadership, Col. Sharma will assist End II End in developing opportunities in both the enterprise and government sectors in India.

“We’re honored to be associated with Col. Sharma,” said Doug Triplehorn, End II End’s vice president for sales. “His decades of experience in military service and private industry make him ideally suited to represent End II End in this important market.” End II End CEO John X. Dwyer said India has a robust and sophisticated satellite industry, and the company looks forward to building relationships with service providers and educating their customers about their breakthrough network optimization technology, which is the first to make Citrix and other highly interactive applications really work over satellite.

End II End develops products that optimize, secure and manage wide area networks, while minimizing network costs and downtime. The company delivers LAN-like performance for mission-critical applications like Citrix, SAP, MS Exchange and Oracle over high-latency connections including satellite.

Douglas Braun Joins Spacenet as VP of Product Management

McLEAN, VA - Douglas Braun has joined Spacenet, Inc. as its new Vice President of Product Management. In this new role, Braun is responsible for the overall management of Spacenet’s product development and lifecycle management strategy, as well as overseeing existing product lines, including the high-performance Connexstar service designed for enterprise and government clients and its value-oriented StarBand line designed for residential and small office customers.

Braun brings nearly 20 years of product management and telecom experience to Spacenet, including his most recent position as Director of Product Management for iDirect Technologies. Previously, he held a range of marketing and product management positions including: Director of Product Management for Telcordia Technologies; Senior Product Development Manager for Facilicom International; and positions with Cincinnati Bell and Hershey Foods. Braun holds a BA in Business Administration and Communications from Rutgers University and an MBA from Fordham University Graduate School of Business Administration.

Spacenet Senior Vice President of Marketing & Corporate Development David Myers said they look forward to Doug applying his impressive skills and experience to help Spacenet expand its leadership in customer-focused and performance oriented satellite networking solutions.

Boeing Florida Operations VP Retires

LOUIS - Former NASA astronaut and space shuttle flight engineer Bruce Melnick, vice president of Boeing Florida Operations, retired from The Boeing Company yesterday.

Melnick led the company’s Florida team for more than 10 years in providing engineering, facilities and maintenance support to NASA and the U.S. Department of Defense for the Space Shuttle, International Space Station (ISS) and Delta rocket programs.

“Bruce Melnick has done a tremendous job in leading Boeing’s Florida Space Coast efforts,” said Brewster Shaw, vice president and general manager, Boeing Space Exploration. “He has demonstrated strong leadership and an unwavering dedication to Space Exploration and a commitment to successful program execution.” **SM**

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NEW PRODUCTS

MRC Introduces MRX4000 Plus

LAS VEGAS, NV - Microwave Radio Communications has introduced MRX4000 Plus, a new ENG central receiver based on the original MRX4000 demodulator-decoder platform.

MRX4000 Plus retains all the capabilities the MRX4000 offers, with the addition of a new, highly linear RF and IF system that provides high dynamic range and improved MER performance in a compact, easy to install rack mounted shelf. Other new features include four IF bandpass filter selections as standard equipment; high and low IF outputs for spectrum monitoring; standard RS-232 serial remote control or optional 10/100 baseT control interface; NTSC or PAL options and AGC and Link Quality data outputs

The original MRX4000 integrated demodulator-decoder was developed by MRC to support narrow channel analog and digital operation in the 2 GHz Broadcast Auxiliary Services (BAS) band. The company will continue to offer its CodeRunner 4 central receiver, but with an extended warranty incentive, and packaged with the original MRX4000 decoder-demodulator as a BAS companion.

Tony Finizio, the president of MRC said the MRX4000 Plus, is the natural evolution of a highly successful product, and one that makes good sense for our customers. Moving to this new platform gives MRC the ability to support SD and HD decoding in addition to alternate modulation formats in future releases.

Advantech Unveils Next Generation Outdoor Satellite Acquisition Controller

MONTREAL, Canada - Advantech AMT, Inc., a Canadian firm that designs, manufactures and markets equipment for satellite and wireless communications, has launched the IPOINT Satellite Acquisition Controller.

Advantech said its controller is suitable for antennas up to 2.4 meters, features an antenna mounted outdoor unit and has an integral 24V, 12A motor drive. It is also suitable for vehicle mounted and fly away antennas, provides single button operation for acquisition and can be integrated into C, Ku, L, Ka and X-Band systems. In addition, it is fully compliant with the Reduction Of Hazardous Substances European Union regulations.

The design of the IPOINT enables simple, rapid and reliable acquisition of the required satellite resulting in low operational costs. The controller has been designed to be easy to integrate, only requiring two cables. IPOINT uses industry standard position transducers found on many small antennas and includes a compass for initial auto orientation.

It uses a GPS receiver for accurate geographic location and directly drives 24V DC motors (for Az, El and Pol). As the internal drive units can provide up to 12A, customers do not need a separate motor drive unit even in instances where relatively high current motors are required.

Dr. Martin Smith, Advantech's head of Antenna Tracking, said this new auto acquisition product compliments the company's existing line of INTRAC antenna tracking controllers. "With its advanced features our clients can reduce their operating costs and reliably initiate their satellite links in a very short time. The IPOINT controller takes full advantage of the many benefits of using an integrated antenna mounted approach."

IDC Announces Expanded DVB-S2 Line and New Multimedia Products

LAS VEGAS - International Datacasting Corporation a leader in products, systems, and services for the distribution of video, audio, and data, has launched new additions to its SuperFlex line of DVB/IP products.

SuperFlex is IDC's family of advanced, open-standards, products for end-to-end distribution of broadband content via satellite and/or terrestrial networks. It is among the first to support the latest digital satellite transmission system, DVB-S2 that makes use of state-of-the-art modulation and coding techniques to deliver performance that approaches the theoretical limit for these systems. The corresponding increase in performance (and potential reduction in cost) is enabling next-generation applications such as IPTV and digital cinema.

IDC's expanded DVB-S2 performance includes support for VCM AND 16APSK. The new SFX 2102/3102 receiver models offer Variable Code Modulation (VCM) giving networks the ability to change modulation and forward error correction dynamically per transport stream. This breakthrough greatly improves network efficiency and significantly reduces operating costs. In addition these models offer expanded data rates from 100 KS/s to 45 MS/s and adds 16APSK modulation. The SFX 3100 versions of the receiver can output up to 190 Mb/s!

NEW PRODUCTS

New IDC new audio and video products include:

SFX Pro Audio for Radio Networks: The latest SFX Pro Audio receivers with integrated Datacast XD offer live IP audio decoding plus the ability for time-shift audio file playout for advanced radio networks. The upgraded dual-channel SFX Pro Audio now features MPEG-4 AAC decoding as well as Livewire, which allows the receiver to convey low-delay and high-reliability audio over switched Ethernet.

Professional SD/HD Video: The new SFX Pro Video receiver features real-time hardware decoding of MPEG-4 AVC (H.264) SD and HD video in a single unit while also offering MPEG1 and MPEG2 hardware decoding to make converting legacy networks easy. The receiver offers a choice of DVB-S or S2 satellite inputs as well as IP and/or ASI input and comes complete with a built-in hard drive for local content insertion. The product also features a choice of industry standard outputs which include

HD multimedia interface (HDMI), HD serial digital interface (HD-SDI), and component video.

Multimedia Server: The new SFX Media Server receivers have a range of advanced features including managed content playback and store-and-forward capabilities. Like other receivers in the SFX series it includes IDC's comprehensive content management and distribution and software client, Datacast XD.

Low-cost data receivers: IDC's lowest-cost edge receiver, the SR2001Plus, has been upgraded to support both DVB-S and DVB-S2 operation. It also includes built-in decryption as well as IDC's proven in-band network management.

Push VOD IPTV: IDC's latest addition to its IPTV solutions repertoire, Datacast XD, embedded in a consumer grade Set-Top-Box (STB) complete with built-in hard drive for program storage and hardware decoding of SD and HD video. Datacast

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NEW PRODUCTS

XD provides guaranteed content delivery along with decryption, digital rights management and Video-on-Demand (VOD) playout control. The STB is available with standard Ethernet (IP) input as well as DVB-S/S2 satellite or ATSC inputs

PROFLine professional audio: the latest family of professional radio network products from PROFLine, including FM radio demodulators, stereo encoders and RDS encoders as well as solutions for CATV radio distribution and FM emergency warning systems. The updated family of receivers, including a new triple channel receiver, now features MPEG-4 HE-AAC for the highest professional audio quality.

Easy-to-Use Satellite Antenna Subsystem from ND SatCom

FRIEDRICHSHAFEN, Germany - ND SatCom is now marketing

the SkyRAY Light antenna subsystem notable for its mobility, light weight, ease of use and fast deployment.

SkyRAY Light offers instant, geographically independent communication in three easy steps: mount the antenna system on a car, SUV or truck, then start the autopointing and the autoacquisition process.

SkyRAY Light supports broadcasters in integrating camera car operation into the production workflow and enables fast news and sports reporting in an affordable way. It extends the LAN into the field and provides a broadband communication infrastructure with always-on capabilities. Besides the broadcast and disaster recovery and business continuity vertical markets, SkyRAY Light also caters to the government market for homeland security and border control. **SM**

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COVER STORY

The Enterprise Market: The Satellite Industry's 'El Dorado'?

by Virgil Labrador

Is the enterprise market the satellite industry's 'El Dorado', as the World Teleport Association recently put it? You know, like the mythical place that always on the horizon but never really reachable?

You would think with literally millions of business enterprises in the world and commerce being more globalized these days, the enterprise market would be one of the largest segment of the satellite industry. But that is simply not the case. In my interviews with CEOs of top satellite service providers such as GlobeCast, BT and others, the enterprise market currently only accounts for a low of five percent to maybe a high of 20 percent of revenues for satellite service providers. The industry which has traditionally served the broadcast and telecom market is finding the enterprise market a tough nut to crack. One common theme, though, among the CEOs I've interviewed is that everyone wants to have a bigger piece of the enterprise market pie.

Satellite service providers are facing stiff competition from telcos and providers of terrestrial services which have been serving the lucrative enterprise market longer than most satellite companies. Also, the enterprise market is not a homogeneous market that but really a number of many diverse markets such as oil and gas, mining, construction, banking, retail, hospitality and many other businesses--all with unique communications needs and service requirements.

Another unique feature of the enterprise market is that the companies who would most likely use satellite solutions for their communication needs are large, usually multinational companies, who may

require initial turnkey and installation services, but tend to operate their system in the long run, which means lesser repeat business for satellite service providers.

According to John Dwyer, CEO of End II End Communications, the reason why companies are slow to adopt to satellite-based solutions is that in many cases they do not understand the value of satellite communications as a viable option and the lack of standards for services by satellite service providers. "Every satellite provider has a different spin on what is the best solution. The



enterprise customer is looking for a reliable provider that has good support and pricing," he said.

The key might be in providing hybrid solutions that include satellite and other delivery mechanisms and by focusing on a specific niche market, according to David Myers, Vice-President, Business Development for Spacenet, which has been relatively successful in the enterprise market. Spacenet, which provide full turnkey solutions and operate on their own 99 percent of the networks that they manage for enterprises, focused initially on what Myers calls the "small

box retailers" such as small restaurants and small retailers, who use satellites just for financial transactions such as point-of-sale or credit card transactions. Spacenet, then migrated to serving bigger retailers such as financial companies and health-care providers who require both a satellite and terrestrial component to their network.

The satellite industry has certainly a lot to offer to enterprises. Satellite technology has been proven to be the best solution for point-to-multipoint requirements that most enterprises need. In a panel at the recently-held Satellite Conference at the NAB in Las Vegas on this subject, the speakers were unanimous in saying that the expertise and experience accumulated by the satellite industry in serving the broadcast and telco markets are transferable to the enterprise market which require more and more sophisticated private networks, business television, digital signage and disaster recovery and back-up systems. The panelists, however, concede that the typical enterprise customer have very specific needs and requirements that necessitate different skill sets.

One company that specializes in just one segment of the enterprise market is Houston, TX-based Caprock Communications, which currently only serves the oil and gas industry and by doing so, has a dominant position in that market.

The view from the horizon bodes well for the enterprise market. Research firm NSR forecasts total global revenues from monthly service fees and sales of customer premise equipment (CPE) will break the US\$5 billion barrier by 2011,

COVER STORY

with enterprise & SME VSAT networks and single site satellite broadband Internet access services leading the way. This is good news for equipment manufacturers and service providers such as Hughes Network Systems and the broadband Ka-band service, WildBlue, commercial satellite fleet operators, according to NSR.

NSR estimates that almost 900 36-MHz transponders will be needed to provision the global base of broadband VSAT sites and satellite Internet access subscribers by 2011. This is almost a 40% increase over transponders leased in 2006.

“Ku-band capacity will play a dominant role in these markets over the entire forecast period,” stated Patrick French, NSR Senior Analyst. “Yet, many companies are seriously looking to commercial Ka-band, not just dedicated Ka-band satellites like WildBlue-1 and Spaceway-3, for these markets, and the next few years will prove critical in determining just how rapidly the industry moves down this path.”

The enterprise market will be driven by demand for services such as digital signage, which is the delivery of video and other content to screens in multiple locations for retailers, according to Greg Hurt, Vice-President of Microspace Communications, a leading provider of broadcast video, data and audio satellite services for business applications.

Another key area for growth is disaster recover and backup solutions, according to Filip Gluszk, Vice-President of Marketing of UDcast. UDcast provides software and hardware solutions for delivery of IP services over satellite systems. The introduction of IP technology to satellite networks is making it more affordable for companies to implement their own networks.

In conclusion, there is certainly no dearth of opportunities in the enterprise market for satellite companies. It's a matter of finding the right niche and being
May 2007

flexible enough to be able to the optimal solution at the most cost-effective manner. That's all enterprises really want.

Sounds easy doesn't it? Not quite. But this industry has been through worse before and prevailed. **SM**



Virgil Labrador is the Managing Editor of Satnews Publishers. He is responsible for all editorial activities worldwide. He edits the Daily subscription service, *Satnews Daily* and the monthly e-magazine, *SatMagazine* and the quarterly, *MilsatMagazine*. He also manages the web portal, *Satnews.com*. He is co-author of the book, *Heavens Fill With Commerce, a Brief History of the Satellite Communications Industry*, for which he was nominated for the Eugene Emme Science Literature award in 2005. He has worked in various capacities in the satellite industry and holds a master's in communications management from the University of Southern California. He can be reached at virgil@satnews.com

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FEATURE

The Business Case for Business Continuity

by John X. Dwyer

Since 2001, a series of manmade and natural disasters - from 9-11 in New York to the tsunami in Indonesia to Hurricane Katrina in the Gulf - has focused the minds of executives on the need to invest in business continuity. A business issue once given more lip service than serious consideration has now become a priority.

Over the same period, the spread of the Internet and intranet into every corner of business operations has made wide area networks (WANs) among the critical assets of the enterprise most in need of protection.

There is a certain irony in this, because one of the leading business continuity risks identified by managers all around the world is their reliance on paper records. Paper is vulnerable. It can be burned, torn or stained. Water damage can render it worthless. The obvious solution is to digitize the information on those documents - in other words, to avoid creating the paper in the first place or to turn it into a digital image accessible over the network. The irony is that by solving one business continuity risk, companies are increasing the risk of business disruption from downtime on the network.

Sizing the Problem

Whatever unimaginable thing can go wrong almost certainly will go wrong given enough time. Mike Semel, vice president of business continuity and compliance services at Connecting Point in Las Vegas, likes to tell a story about understanding business risks. A small



firm of radiologists wanted his advice on business continuity and disaster planning. He asked them what scenarios might shut them down, and the radiologists insisted that the risk of a hazardous material accident was virtually zero. All the hazardous chemicals were at the hospitals. Then Semel used Google Earth to show them a satellite view of their office, which was within 80 feet of railroad tracks that regularly carried large shipments of hazardous materials. Across the street was a sporting good store that warehoused large quantities of gunpowder and other flammable chemicals. The point? The radiologists were thinking just about what was in their office rather than about the total range of risks their business faced. (*Channel Advisor*, August-October 2006)

The costs of shutting down an office or a business are relatively easy to understand. But an outage on the WAN? On a gut level, it seems more inconvenience than threat. How many times have we called a customer service number or stood in line at a retail outlet only to be told, "I'm sorry,

our computer's down. Can you call back?" Annoying, certainly, but hardly a disaster.

Estimating the Costs of WAN Downtime

Those watching the bottom line may beg to differ. Courtney cites a 2004 study of 80 large US companies conducted by analyst firm Infonetics, which showed that they experienced an average of 501 hours of network downtime per year, and that this cost them an estimated 4% of their annual revenues, totaling millions of dollars. In separate research, analyst at Gartner estimated the hourly cost of network downtime for large companies at \$42,000, with a typical business experiencing 87 hours of downtime per year, resulting in total losses exceeding \$3.6 million per company.

Infonetics, based in San Jose, updated that research in 2006 with a survey of midsize businesses (101 to 1,000 employees), which suggested that they lost an average of 1% of annual revenue, or \$867,000, to an average of 140 hours of downtime every year, with 56% of that caused by pure outages. In other research that drilled down into specifics, Infonetics found that, in its sample group, wide area networks experienced 3.7 hours of outage per month and an additional 3.4 hours of service degradation per month.

Whether or not you choose to accept this blizzard of statistics, it is fairly straightforward to evaluate your own organization's costs for downtime

FEATURE

in the wide area network. The results may startle you.

Downtime Cost Calculator

There are two financial losses associated with network downtime: lost productivity and business losses.

A mere minute of downtime can bring big losses

SOURCE: ALINEAN

Business Application
Estimated outage cost per minute

Supply chain	
Management	\$11,000
E-commerce	\$10,000
Customer service	\$3,700
ATM/POS/EFT	\$3,500
Financial management	\$1,500
Human capital management	\$1,000
Messaging	\$1,000

Lost Productivity. To calculate the loss of productivity due to wide area network outages:

- Determine the average hourly labor cost of employees at a site, which is total payroll costs divided by the number of employees, divided by the number of working hours in a year, typically 2,080.
- Determine the impact on productivity of an outage at a work site and express it as a percentage. If employees spend 100% of their time interacting with network applications - as would a customer service representative or equity trader - the impact is 100%. For most employees, the impact is less than 100% but may still be quite large.
- Multiply the number of workers affected by the outage by the average

hourly labor cost, and by the percentage impact on productivity.

- Multiply the result by the duration of downtime, expressed in hours, to find the total cost of lost productivity.

Business Losses. To calculate the business loss due to wide area network outages:

- Determine the average profit per employee by dividing the company's

Lost Productivity

Average hourly labor cost	\$24
Impact on productivity 50%	
Number of workers affected	300
Duration of outage 4 hours	
Subtotal:	\$24 x .50 x 300 x 4 = \$14,400
Business Losses	
Average profit per employee	\$37
Subtotal:	\$37 x .50 x 300 x 4 = \$22,200
Total	\$36,600

profit in the most recent year by the number of employees.

- Multiply the number of workers affected by the outage by the average profit per employee, and by the percentage impact on productivity, as described above.
- Multiply the result by the duration of downtime, expressed in hours, to find the total business impact.



Protecting Against WAN Outages

The key to protecting against WAN outages is circuit redundancy. Should the primary circuit linking the remote location to the enterprise network go down, a backup circuit must be available and ready to take its place.

Achieving true redundancy, however, is harder than it looks. It is simple to purchase backup DSL or T1 line from the local telco - but that line almost certainly shares risers, poles, conduits and other crucial elements with the primary circuit. This is true even if the circuit is provided by a different carrier, because there are a limited number of rights-of-way available to service providers in any community. A disaster that takes out the primary - from weather to a careless backhoe operator - is more than likely to take out the backup as well. Major disasters in particular have a cascading effect that produces unforeseen consequences.

The two biggest disasters of this decade illustrate the point. The destruction of the World Trade Center in New York City took down all telephone service in lower Manhattan when it destroyed the Verizon switching center. But it also took out wireline and cellular service throughout the island because the systems became completely overloaded. The only dependable communi-

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cations into and out of the disaster zone was through hastily deployed portable satellite antennas.

When Hurricane Katrina swept through the Gulf of Mexico, in addition to the other horrendous damage done, it took out a microwave-based telephone and data network that connected the hundreds of offshore oil platforms throughout the region. High winds tore microwave dishes from the platforms and knocked over the land-based towers. But a second communications network based on satellite survived with only scattered outages.

Satellite offers true redundancy because the circuit is a line-of-sight link to a satellite orbiting 22,500 miles above the earth's equator and back down to another antenna within the same "footprint." As long as there is electric power and an antenna, literally nothing on earth can stop it.

Making Satellite Redundancy Pay Off

If satellite is such a perfect redundancy solution, why isn't it the standard?

There are two reasons. First, satellite bandwidth is expensive relative to DSL, T1 or even fiber to the premises. There are a limited number of satellites in orbit and the total available bandwidth is only a tiny fraction of that accessible through terrestrial networks. Limited supply and the high cost of building and launching a satellite have kept satellite capacity from following the downward price trend of the rest of the telecom industry.

There is also the matter of that 43,000-mile round-trip required to get each digital bit to its destination. It introduces latency much greater than

standard Internet Protocol was designed to handle. This presents little challenge to largely one-way transmissions, whether of TV pictures or large data files, because data-tweaking techniques collectively known as acceleration can be used to efficiently fill the pipe. But it presents a major obstacle when we try to run the "chatty," highly-interactive applications that are the core of most enterprises, whether it is MS Exchange, SAP or Oracle, over a virtual private network. Not even Citrix can achieve acceptable performance in this environment under normal use.

So, if satellite is to be used for business continuity, something must be done to use the costly bandwidth very efficiently and to eliminate the latency issues that doom the core enterprise applications to failure.

Is Satellite-Based Redundancy Affordable?

The answer depends on how valuable the high degree of protection afforded by satellite is to your organization. That value may be measurable in dollars and cents, using the kind of financial calculations provided in this white paper. There may also be strategic considerations such as customer satisfaction, risk reduction or the need to

maintain the value of information assets that determine your choice.

Like many IT investments, the cost of satellite business continuity depends on the implementation and cannot realistically be "ballparked." The largest single cost, however, will be bandwidth, and the use of software such as those provided by our company End II End Communications' Optimal family of products, ensures not only a LAN-like experience for remote users over a VPN but as much as 30% reduction in satellite bandwidth requirements.

One solution adopted by many End II End customers is to deploy full-time satellite connectivity to a small number of remote locations, then install Optima-Link Business Continuity at all locations for use in case of WAN outages. This is highly cost-effective for companies with a few remote sites that have poor-quality, expensive or nonexistent terrestrial broadband. These sites gain LAN-like access to the enterprise network and the entire network gains business continuity protection. If terrestrial connectivity goes down at any location, the OptimalHub software's automatic failover feature switches service to the satellite, "borrowing" a bit of bandwidth to bridge the short-term need. **SM**



John X. Dwyer is CEO of End II End Communications, a company that develops products that optimize, secure and manage the wide area network, enabling your enterprise applications to go where they have never gone before. End II End also offers total solutions for network deployment, business continuity and disaster recovery that combine software, hardware and satellite services to overcome local or global challenges to enterprise-class connectivity. For more information go to www.eiiecomm.com or call 1-866-926-3443. He can be reached at jdwyer@eiiecomm.com

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European DARS – Does it Have a Prayer?

by Chris Forrester

It was only in March that we looked in some detail at the prospects for satellite radio, focusing on the planned consolidation between XM and Sirius. This issue we make no apology for returning to satellite radio, but this time concentrating on its European prospects – which might not be bowl of cherries.

In essence there are two rival bidders for the European satellite-radio crown: long-established WorldSpace, headquartered in Washington and well-known for its existing attempts to sell subscription radio to the “emerging world”. XM Satellite owns a small portion of WorldSpace, and it was WorldSpace’s original concept and technical resources that XM tapped into to launch its own service. WorldSpace still supplies a couple of channels into the XM portfolio of choices.

WorldSpace’s main European rival is Ondas Media, based in Madrid, of which more in a moment.

As this is written WorldSpace has just filed its all-telling Securities & Exchange Commission Form 10-K statement, on April 17, and it didn’t make especially good reading. In fact it looked like a nightmare. An analysis of the statement shows a business in dire straits, especially limited cash resources and a mountainous set of sales objectives that in any objective view would challenge a more able organisation.

WorldSpace admit that India, their most successful market to date but where they have spent millions of dollars in trying to a modest sales



Torsten Freyremark, Chairman, Ondas Media

a terrestrially augmented mobile service in India after receiving appropriate regulatory approvals and to that end we are developing next generation receivers capable of receiving signals from both our satellites and from the terrestrial repeater networks,” says the Company’s 10-K.

WorldSpace talks of rolling out services in the Middle East (Bahrain and the United Arab Emirates) “this year” (and where it does hold suitable licences) but it does not have receiver units currently ready although is “discussing” with the after-sales market the possibility of making in-car units available for retro-fitting into vehicles. WorldSpace has “2,000” subscribers spread over the whole of the Middle

**“ We don’t see WorldSpace as a threat at all ”
“ We do not believe that WorldSpace will have a real service up and running next year ”**

impact, has “proved to be a difficult market to achieve the level of subscriber additions we were expecting when we launched our commercial service in 2005. We still believe the India market fundamentals are attractive, but we have reduced 2007 spending.”

To have carried on spending precious cash in supporting 1500 retail stores and 737 “direct sales agents” who collectively have generated just 160,000 subs won since 2000 would be foolhardy, especially when WorldSpace still does not yet possess an India terrestrial repeater licences. “We plan to introduce

East, and more than 26,000 subscribers in Africa.

They also have “plans” for a service in China, and have developed a “China-only” version of their receivers, as part of their strategy to appease China’s authorities, but despite this move they still have not received permission to launch in China.

They also admit that their European and African satellite (AfriStar) has solar panel defects, and these will impact the craft’s performance beginning next year (and get worse over time). They say that

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work they have done with satellite builder Astrium will extend the useful life of the craft, but with fewer channels active.

WorldSpace also talks of various litigation matters, but barely mentions the assorted Class Action suits it is now facing, other than it will be “vigorously defending” any claims. It also reveals that it also has to pay \$16m of outstanding income taxes to the IRS, at a rate of \$340,000 a month currently and a final payment of \$13.3m plus accrued interest by September 30 this year. Not bad for a business that only earned total revenues last year of \$15.6m, yet managed to soak up \$104m-worth of cash in its operating activities.

Indeed, WorldSpace continues to be extraordinarily generous to its staff in terms of stock-options and other benefits – especially when one remembers the \$15.6m in revenues last year – which during 2006 paid out £3.6m in cash. WorldSpace also continues its charitable work (!) and funded transponder capacity worth \$3.9m to First Voice and its “social welfare contributions”. WorldSpace’s founder, Noah Samara, is chairman of First Voice.

As to compensation, WorldSpace pays its staff well. Noah Samara pocketed \$2.9m, while its three ‘Chief Operating Officers’ (Andenet Ras-Work left during the year, leaving two co-COOs in his place) received \$4m between them. Again, not bad for a \$15m in total revenue business. In comparison SES Global, 2nd largest satellite operator on the planet, paid its 5-man executive team (including the CEO and CFO) a total of just \$4.7m between them last year.

Samara is especially well rewarded, with an annual incentive bonus scheme equal to 95% of his base \$650,000 salary,

Chipsets

WorldSpace ordered 722,445 of its special sat-radio chipsets for supply by Dec 31st 2006, at a cost of \$18.2m. They have not drawn this order down, and have recorded a liability for the sum as yet unpaid.

....and computers

Good financial management is important to any quoted company, and so WorldSpace has invested in a new “global enterprise resource planning” system, at a cost of \$3.3m, PLUS annual maintenance, upgrades and technical support of a further \$7.1m spread over 4 years.



**Noah Samara,
WorldSpace CEO**

plus shares, plus, plus, plus. The list of benefits is long. WorldSpace must also be hoping for good health for Mr Samara, and a long professional relationship with their founder, president and CEO. Because if he quits, gets sick, or they have to let him go, the compensation will mop up a shed-load of whatever cash is still left in the company’s coffers.

As at Dec 31st 2006 WorldSpace held marketable securities of \$138m, down from \$239m in 2005. Then, in April it achieved a restructuring of its convertible notes, the end result of which means they have access to another \$50m in cash.

Investment bankers Bear Stearns, now seemingly the only remaining observer on Wall Street with any sort of

interest in WorldSpace says that the \$50m the broadcaster gets almost immediately will help overall cash flow and agrees that it gets “operational flexibility” to execute its already much streamlined plan, but the bank also stresses that investors will now be focussing closely on the company’s execution of that plan.

And the bank gives a few pointers, most of which are negative. It says that growth in India, currently a primary market for WorldSpace, “has not picked up”. A retailer check carried out by the bank said consumer interest remained “muted”, not helped by a lack of product choice.

Moreover, its India transmission licence, expected by the middle of last year has yet to be awarded, adding to the broadcaster’s woes. The bank has also picked on the slippage in WorldSpace’s Italian roll-out plans, now targeted for 2008. It also questions progress – or the lack of – in Bahrain and South Africa.

However, the bank says that WorldSpace’s funding risk has now been averted, but the company will still need to access “additional capital by Q1-Q2/2008. “Given the track record, the company will have to execute flawlessly on multiple fronts in a very short while

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to turn round investor confidence before it needs to access capital markets.”

At the same time, a report from India talks of WorldSpace’s local executive (chief marketing officer, Harshad Jain) reportedly suggesting that the satellite-radio broadcaster is to invest around \$150m in India over the next two years – but fails to say where the cash might come from.

The bottom line: WorldSpace’s net loss last year was a breathtaking \$128m, compared with \$79.8m in 2005. Its AfriStar satellite is failing, and one must question whether it can fund the refurbishment and launch of the ground spare. It is not a happy picture. WorldSpace has its AGM on May 25th.

Benoit Chereau CEO/ chairman WorldSpace France spoke to us in March about its European plans, especially in Italy, where WorldSpace says it will be launching a subscription service next year. He explained that they were no longer accepting subscriptions for service from WorldSpace’s European beam of its AfriStar satellite, because it would be reconfigured this coming winter ahead of the Italian launch. “We have contracts covering the design and manufacture of the transmitter repeaters, and with Telecom Italia to design and deploy the network. The first two repeaters will be installed in Toulouse, France, [in April] for testing. We have been waiting for the frequencies to be confirmed, but then the techni-

cal tests can take place. Then we will order the large volumes of repeaters from the manufacturers, but they will not take long. We have the funds.”

“As for radio units, we know that an important part of the success of the project will be having radios installed in cars,” said Chereau. “But there’s another

IT'S A JUNGLE DOWN THERE

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Worldspace facing Class Actions

WorldSpace has been hit by a number of class-action lawsuits. Connecticut-based legal firm Schatz Nobel IZard, well known for a number of high-profile class-actions, is one of the filers, and its writ alleges “that Worldspace made materially false and misleading statements to the investing public and misrepresented or failed to disclose that expired subscriptions were included in the company’s subscriber count for as many as 90 days following expiration of an initial three-month promotional period, causing the company’s stock price to become artificially inflated.”

The actions argue that investors were not given correct information about churned subscribers when Worldspace mounted its IPO in August 2005, with spectacular results. It was looking to raise \$100m, and saw an offer much oversubscribed, helped by fairly glowing claims of its progress – and prospects.

Another firm, Labaton Sucharow & Rudoff filed its lawsuit on March 15 in the United States District Court for the Southern District of New York, again specifying the IPO of August 4, 2005, and naming WorldSpace, Noah A. Samaram (sic), Sridhar Ganesan, and UBS Securities LLC as “Defendants”. The action is detailed at: www.labaton.com/en/about/press/WorldSpace.cfm

Worldspace’s stock opened at \$20 barely 18 months ago. It has since fallen back, and now trades at just \$3.30.

market, concentrated on plug and play radios, and the portable market. As we view it today the difference between the plug & play and the car market is a couple of months, and I cannot say today which will happen first. What I can say is that both developments are progressing well. We have not publicly announced any agreements, and we are in discussions with a large number of OEMs and after-market suppliers, but there’s nothing we can talk about today. Discussions are always too slow, and it is complex because everything is being developed in parallel, including chipsets, modules, and overall design. The standard was only approved in September 2006, so it is not as if it was years ago. The reference designs are being worked on now, and the chip-set developers now have 100% of the

information they need, but everyone else has yet to hit that 100% mark, but while everyone agrees on the concept we have to see these key milestones achieved. However, I can tell you that these different elements will not then be sequential. They will happen in parallel, and we are working hard to minimise delays.”

WorldSpace has for some time had a spare satellite sitting in a temperature and humidity controlled environment at a French satellite facility. Questioned on what this craft, now dubbed FM3, would be used for and Chereau said it would need some upgrading and modifications, but was intended for Europe, but its deployment also influenced the company’s actions for Latin America where WorldSpace says it has rights. “The general idea for Latin America is

that once we launch FM3 over Europe, we have a plan to launch a high-powered satellite that extends right over Russia. The plan is that the day we launch FM3 we order a new one. Now we will need the money, the credibility, and then a 3 year wait while it’s built. But then we can move FM3 to another spot, maybe 2012-2013. This is a maybe, but it is a strong maybe.”

However, WorldSpace’s SVP/Corporate Affairs Judith Pryor said it was very much a case of one step at a time. “We have our primary market in Asia, now with Italy, and we will grow out from Italy into the rest of Europe but one market at a time. We also have an operational satellite with a beam that will be re-directed and with new content for that market. While all this is going on we still have another satellite sitting on a shelf that with a little tweaking can be made available.”

“Tweaking” satellites costs money, so does launching them. There is no real guidance on where the cash will come from to ‘tweak’ their existing satellite, or build another, let alone launch the much-needed craft.

Ondas Media – Doing better?

Which is not to say that Ondas Media’s garden is all rosy, either. In March it lost its CEO, Celso Azevedo, replacing him with Jacinto Palacios, formerly CEO for the Spanish satellite operator, Hispasat.

Ondas Media says it is very busy assembling a portfolio of strategic partners and investors as part of the third financing round, which it hopes to have in place by the autumn. Torsten Freymark, chairman, says they are talking to media players, the auto industry, government and satellite

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communities. “Without these key players present from the four pillars then satellite radio in Europe is not going to happen. We have some partnerships already made public and now we have others in discussion on the OEM side and on the space infrastructure side pending as well. These elements are coming together very nicely and over the next few months we will be in a position to communicate in more detail.”

Freymark added that Ondas is in its Third Round cash raising exercise, and is making good progress. “For Round Three we are targeting •50m-•75m. This will permit us to push the project significantly forward. Raising the cash is obviously important but so is achieving the strategic partnerships that we have mentioned. An automotive deal, a satellite contract, a government agreement and so forth will provide solid underpinning to the whole project.”

“Our goal is to see these elements in place by the autumn of this year. There are other challenges of course, not least the assembly and creation of European content as will recruiting experienced staff. The automotive industry also sets its own obvious deadlines. It knows precisely when it has to release new models into the showrooms and is already planning its 2009-2010 model ranges. It knows which vehicles and the sorts of volumes that will roll down the production line at that period. We need to create with them the momentum that will see our equipment installed in sufficient numbers in those model ranges. Can the radios be manufactured? And then delivered?”

The current merger proposals in North America between XM and Sirius represents more good news, says Freymark. “While they are solely focused on their US businesses and sorting out their current challenges, this means they are not looking anywhere else outside North America and we are

WorldSpace, on competition from Ondas: “Perhaps in 5 or 6 years we can worry about them, at best”

free from their competition. If the merger were to happen we believe there will be some interesting opportunities for us in terms of securing management talent for Ondas. We might be able to secure some significant human resources. But there’s another element: the merger shows that the financial community fully believes in the business model, where two rivals might not work but a single player could be successful. It is also a signal to Europe not to make the same mistake as the US. There’s room for one.”

“We do not believe that WorldSpace will have a real service up and running next year,” he added. “We don’t see them having automotive systems in place by then. They have only an ailing satellite with 850 kHz of spectrum with a spillover into Southern Europe and to provide satellite radio in a mobile environment then you need a tremendous amount of capital to fund the immense repeater network in Italy alone if you want to provide comprehensive coverage. I have not read anything yet about any success that they might have in raising cash to fund this exercise.”

There are also plenty of critics, even amongst established European satellite operators, who question the success of satellite radio over Europe. Freymark is not fazed. “The objectors who talk about Europe’s existing radio infrastructure and the challenges of overcoming Europe’s many languages simply don’t understand the market. The people we are talking to share our optimism. We have carried out our own market research but more importantly perhaps they have also studied the market closely and they know their sectors very well. In other words it isn’t just Ondas research that everyone is depending upon. The automotive industry has structured its research to particularly address the question of what types of content is required, what languages are needed, what do people like and dislike in radio today, and so forth. It is simply amazing what has come out of these studies. In fact the auto manufacturers themselves were truly shocked at what they found. In a nutshell the studies show that there is an addressable market of between 20 and 40 million automotive customers to whom satellite radio would be interesting. Within that sort of a market there is plenty of scale and scope for a business. This number includes cross border truck drivers. This segment alone is significant; there are seven million trucks making daily cross border routes and for the vast majority of these people they absolutely cannot get their ‘local’ radio services.” **SM**



London-based **Chris Forrester**, a well-known broadcasting journalist is the Editor for Europe, Middle East and Africa for SATMAGAZINE. He reports on all aspects of the industry with special emphasis on content, the business of television and emerging technologies. He has a unique knowledge of the Middle East broadcasting scene, having interviewed at length the operational heads of each of the main channels and pay-TV platforms. He can be reached at chrisforrester@compuserve.com

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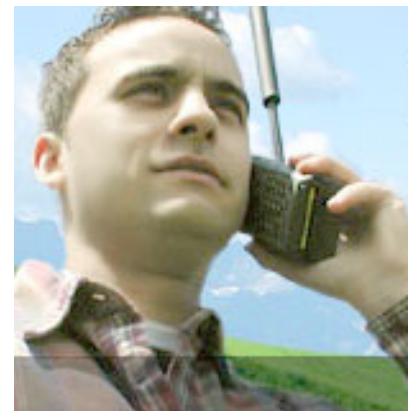
Competition in the Handheld MSS Market

by **Tim Farrar**,
President of Telecom, Media and Finance Associates

Globalstar’s announcement in February 2007 that degradation of the S-band amplifiers on its satellites is now occurring at a rate that is “faster than previously anticipated”, has thrown the MSS market into turmoil, as its competitors strive to take advantage of the uncertainty that has been created by the prospect that if Globalstar is unable to correct the amplifier problem, “substantially all of the Company’s currently in-orbit satellites will cease to be able to support two-way communications services” by some time in 2008.

However, one of the most interesting issues about the handheld MSS market is that almost all of the new entrants into this market are suffering from delays to the launch of their services. Specifically, Inmarsat has stated that while its handheld service will be launched on the I4F1 satellite (covering most of Europe, Africa, the Middle East and Asia) in the second half of 2007, the service will not be available on a global basis (including North America) before mid-2008, and may even be delayed into 2009. This is due to the need to launch the third I4 satellite (which does not yet have a firm launch slot on the Atlas rocket) and then ‘relock’ the satellites by moving them to different orbital slots to provide higher elevation coverage across major land masses such as North America.

In the North American market, ICO recently applied to the FCC for a delay in its milestones for satellite launch (to November 30, 2007) and service availability (to December 31, 2007), and this application was granted in early February 2007. As a result, full commercial



availability of handheld MSS services from ICO, with handsets available in volume, is unlikely to happen before the second quarter of 2008. In our view Terrestar is also unlikely to offer handheld MSS services on a fully commercial basis until the very end of 2008 (its regulatory deadline for commercial launch is November 2008, and

Terrestar stated in an SEC filing in January 2007 that it does not expect to generate significant revenues before 2009).

In international markets, Globalstar also competes with Thuraya, which had planned to launch its Thuraya 3 satellite to provide extended coverage in East Asia in March 2007. However, this

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launch has been set back by the January 2007 Sea Launch failure and Thuraya is now expected to be the return-to-flight customer on Sea Launch, probably in the fourth quarter of 2007. This would push back availability of the Thuraya service in East Asia (including the Australian and Korean markets where Globalstar is relatively strong) to around the end of the first quarter of 2008.

These delays leave Iridium as the primary competitor to Globalstar, in most regions where Globalstar has a strong presence, for at least the next year. Iridium has reiterated that it expects the first generation Iridium system to last through 2013-14, pointing out that the radiation exposure of the Globalstar satellites (which are in a higher orbit) is



as much as 10 times that of Iridium. However, Globalstar's problems may create concerns amongst certain customers about the long term feasibility of LEO systems in general, and Inmarsat is trying to encourage this view, promoting the long lifetime of its I4 satellites (expected to last through 2020) and stating that both LEO constellations are coming to the end of their lives and they

MSUA BRINGS BACK HIGHLY ACCLAIMED MSUA-4 INTERNATIONAL CONFERENCE AND EXHIBITION



McLean, VA—The Mobile Satellite Users Association (MSUA) announced that it is sponsoring the successful Mobile Satellite Users Association International Conference and Exhibition, following a five year hiatus. MSUA-4 is the only conference dedicated to the mobile satellite industry, and will be held at the Pier 5 Hotel on Baltimore's Inner Harbor, on May 21-23, 2007.

"MSUA-4 is coming at a critical time for the mobile satellite industry" explained Bob Roe, chairman of the MSUA, and president, Stratos Government Services, Inc, "With billions of dollars of investments being made in new mobile satellite systems; companies are offering a wide range of more advanced voice and data services, with much smaller, cheaper terminals. We think this conference will be of great interest to both mobile satellite distributors and customers throughout North America, as the only opportunity to hear from all the major providers of MSS and learn from the experiences of other MSS end users."

Exhibition and sponsorships are available for MSUA members and non-members, with early bird discounts available through March.

For full details contact Betsy Kulick for information on sponsorships (sponsorship@msua.org), George Zachmann for information on exhibits (exhibits@msua.org) and Tara Blair for registration information (1-757-747-2342) or register online at www.msua.org/msua4.

believe that Iridium will announce its "system is failing in the years ahead", while the replacement plans of Iridium and Globalstar are "not even close to being feasible".

Our view is that Iridium stands to gain most from Globalstar's announcement, although since Globalstar has differentiated itself from Iridium primarily on price, only relatively few customers, for whom the necessity of reliable satellite coverage outweighs cost considerations, are likely to shift their MSS usage to Iridium in the near term.

Lower usage customers, for whom the cheaper Globalstar pricing was an essential part of the purchase decision, are less likely to move to other services in the near term, unless service performance on the Globalstar network deteriorates further.

However, when ICO does eventually launch service, we expect that their phone will be at least as attractive as Globalstar's handset, in terms of size and weight. As a result if ICO moves aggressively to target existing MSS users, and offers low service pricing, then this would put much more pressure

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on Globalstar's existing customer base. On the other hand, Terrestar appears to be more focused on Ancillary Terrestrial Component (ATC) opportunities, and thus may place rather less emphasis on existing MSS markets.

The final new competitor in the handheld market will be Inmarsat, which has stated its intention to be aggressive on pricing, with an indicated benchmark price of less than \$1 per minute, and handset prices of less than \$500. Inmarsat has a significant advantage in that it will ultimately be able to offer global coverage (with the exception of the poles) and we expect Inmarsat's handheld phone to appeal most successfully to international travelers based in developed countries who are visiting

less developed areas. This will position Inmarsat to attack Iridium's customer base, although global coverage will not be available after the launch of the third I4 satellite, and so Inmarsat's handheld market growth may not accelerate until 2009, making it hard to achieve their targeted \$50M of wholesale revenues in 2010. Even if Globalstar's service deteriorates over the next 18 months, it is unclear that Inmarsat would be a significant beneficiary, since the bulk of Globalstar's handheld customer base is in North America, and ICO (and potentially also Terrestar) will have entered this market with a more attractive and potentially more economic service before Inmarsat is able to offer service there.

Note:

This article is extracted from our March 2007 research report on the MSS sector

To find out more about our MSS research, visit www.tmfassociates.com/reports **SM**



Tim Farrar is President of Telecom, Media and Finance Associates (www.tmfassociates.com), a consulting company based in Menlo Park, CA, which analyzes technical and financial issues in the satellite sector, and specializes particularly in Mobile Satellite Services (MSS) and Ancillary Terrestrial Component (ATC) issues. Tim has over 14 years consulting experience across the satellite and telecom industries, having worked for leading technical and strategy consultancies in both the UK and US. He has an M.A. and a Ph.D. from the University of Cambridge. He is also President of the Mobile Satellite Users Association (MSUA). He can be reached by phone on (650) 839 0376 or by email at tim.farrar@tmfassociates.com

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REGIONAL UPDATE-Latin America

Project Update: GESAC Progam – Brazil

By Bernardo Schneiderman

The Brazilian Government's Ministry of Communications just announced in the last week of April 2007 that the GESAC e-government satellite project which has already installed 3,300 sites will be expanded to 20,000 sites in the next year which will include 10,000 public school sites.

Background of the Project:

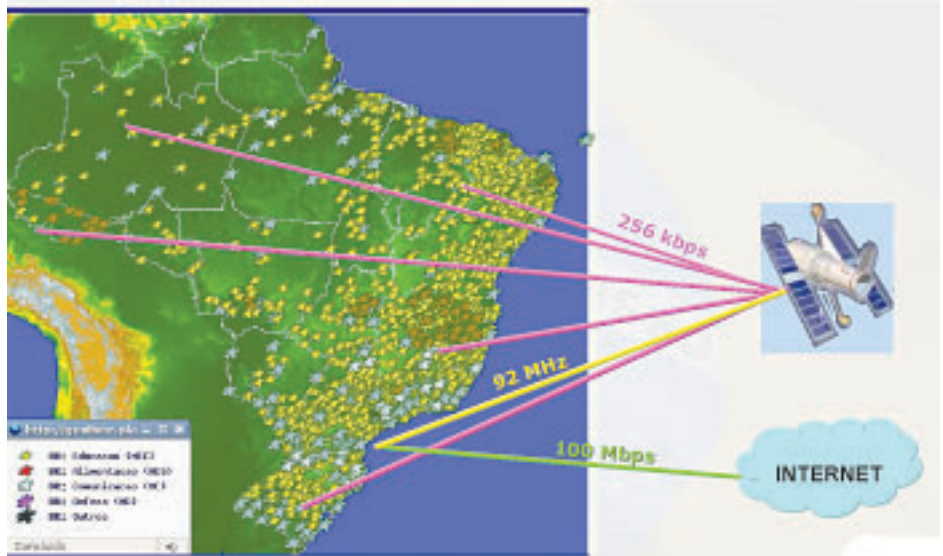
GESAC – Governo Electronico de Atendimento ao Cidadao (E-Gov program to provide digital inclusion and services to the citizens of Brazil) was launched in 2002. The program started with the intention to provide Internet services to enable citizens to interact with the Brazilian government's web sites and provide telecenters with the intention to educate the low income population to use computers and internet. During the first phase of the program Gilat Brazil won in an open bid the contract to provide services for 2 years and implemented 2,000 sites. The second phase of the program was launch in 2004 and Comsat Brasil won the contract in an open bid to implement a total of 3,300 sites with the replacement with the original 2,000 sites with a new platform with more internet access and using VSAT with DVB-RCS technology. During the current phase Comsat implemented the solution with VIASAT technology.

Current Project Status

Based in information from Mr. Heliomar Medeiros – Director of GESAC program during recent media event in



Rio de Janeiro, he announced that the GESAC Program expansion is not only for satellite technology but will be divided into three subcontracts. One contract will be only for satellite solution provider estimated to be 11,000 sites. The other two sites will be divided in major metropolitan areas and minor metropolitan areas. The main reason for this new requirement is that in Brazil (see map above), some cities outside the



GESAC PROGRAM CURRENT AND FUTURE STATUS

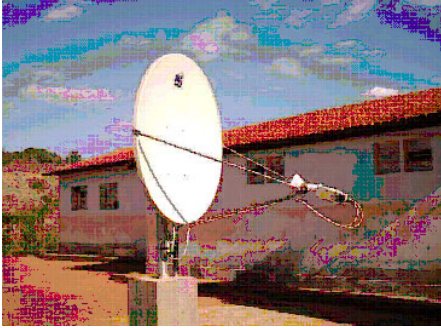
Description	Current	New Program
Point of Presence	3.400 sites	20,000 sites
Municipalites served	2.200	5.565
Public Schools	2.400	10.000
Internet Access	256Kbps	256 Kbps to 8 Mbps
Tecnology	Satellite 4 transponders	Satellite(up to 20 transponders and other technologies

Existing GESAC Program Coverage

main metropolitan areas do not have any kind of internet access nor voice communications and satellite is the only option.

The other 9,000 sites are locations with some existing telecom infrastructure. In this case the service provider could use any technology that makes sense

REGIONAL UPDATE



GESAC is expanding from 3,300 to 20,000 sites in the next year

for the project (ADSL, Cable Modem, WIMAX, WiFi, etc).

The budget for this new program is estimated at US\$ 200 million for the 5 year-period of the contract. The GESAC program will pay monthly to the service providers that will win the auction bid with the target to keep the system running for the next 5 years. The contract will include operation and maintenance of each access point. The main logistic of the program is not only to activate the site but keep the site running for the period of the contract so that any citizen can have access to the application in tele-centers, schools, border towns, etc.

This will be the largest program to be launched in Latin America in the

last 10 years to cover a broad range of Internet access technologies where satellite technology plays a key role.

This new program expansion has the potential of using up to 20 Ku-Band transponders considering the existing program with 3,000 sites are utilizing 4 Ku-transponders from Amazonas (Hispamar) and Estrela do Sul (Loral Skynet do Brasil).

The next step with will be a public hearing of the bid document during the second half of May 2007 and the official bid document will be issued in June with potential for the Auction bid for the project to be conclude in July. The expectation is to implement this 20,000 sites until the end of 2008.

This program will not only benefit domestic service providers in Brazil but all major VSAT vendors and satellite operators that have capacity in Ku-Band available in the market during the next six months. **SM**



Bernardo Schneiderman has been active in the Telecom/Broadband industry for the last 37 years with experience in Project Management, Business Development, Sales & Marketing. He has been working for Telecom Operators, Satellite Carriers, High Tech Equipment Manufacturers and Consulting & Engineering Services in the USA and in the International market. He worked in Latin America, Africa, Europe and in the USA as part of his professional activities. He has been Bus. Dev. Liaison for GVF – Global VSAT Forum (www.gvf.org). He is active SSPI (Society of Satellite Professional International- www.sspi.org) member supporting new Chapters. He is editor for SatMagazine for new technologies & Latin America. He is active speaker and moderator in the Telecom/Wireless major conference in the Global Market covering new technologies and market trends. He has an MBA in Telecommunications Management and International Business from the University of San Francisco, CA, USA and BSEE in Telecom from UFRJ, Rio de Janeiro Brazil He can be reached at bernardo@tbc-telematics.com



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EXECUTIVE SPOTLIGHT

Interview with Bryan McGuirk, President of the Media and Enterprise Business of SES Americom



At the recently-concluded NAB 2007 show in Las Vegas, SatMagazine Managing Editor, Virgil Labrador conducted an interview for the new multimedia section of Satnews.com to be called "SatVideo" with Bryan McGuirk, President of the Media and Enterprise Business of US-based satellite operator SES Americom. An industry veteran, who has extensive experience developing media-based businesses, Bryan oversaw the development of SES Americom's IPTV, HD, mobile TV and enterprise businesses. On the verge of its nationwide commercial IPTV launch, Bryan spoke on SES Americom's position in the North American satellite market and its prospects for the future. Excerpts of the interview:

Q. Two years ago when we first did this interview here at the NAB, you were facing a very different competitive environment in the North American fixed services market. There has been a lot of consolidation with your erstwhile rival PanAmSat being merged with Intelsat and Loral Skynet purchasing Telesat Canada and returning with a vengeance in the North American Fixed Satellite Services (FSS) market after being held out by a non-compete clause for two years when it sold its North America assets to Intelsat. What are your views on the competitive environment in North America and how is SES Americom currently positioned in this market?

A. The North American satellite market is really more than just FSS. We really look at what our customers are saying and they're asking us to deliver more than just power and bandwidth. In order to do that we had to innovate platforms across multiple segments of the industry—in two areas in general: IP solutions on one hand and HD on the other. We've focused on those two

areas. To begin, I'd just like to mention that in the IP area, we actually just announced this week that our IP platform, IP PRIME has already signed 350 channels and we are on the verge of commercial launch. You may not know this, but we've been in trials with four different telcos since October last year. Those trials have gone extremely well and we are now shrink-wrapped and commercial-ready.

On the enterprise side, we've announced recently that we launched our REDisat product, which is an IP-based disaster recovery product. So that really helps companies recover quickly and provide business continuity during disasters and emergencies.

Lastly, another area we can mention is that we just launched our HD occasional business platform, which is the first of its kind in the industry. This platform sets aside space for a growing segment which is HD contributions from the industry. That began about a year and a half ago with the sports business and now it's extending into news feeds this year.

Q. But right now you are faced with more competition than ever. How are you positioned in the North American market today?

A. I believe we are very well positioned. In the FSS sector, our fleet



SatMagazine Managing Editor Virgil Labrador interviewing SES Americom Media and Enterprise Business President Bryan McGuirk at the NAB in Las Vegas for the new video segment of Satnews.com to be called "SatVideo."

EXECUTIVE SPOTLIGHT

is second to none. We have global coverage. We have three tremendous operating companies with SES Americom in the United States, SES Astra in Europe, Middle East and Africa and SES New Skies for the rest of the world. We never really had that much power and coverage and the addition of New Skies rounds out all the coverage of the world for us.

Q. The buzz here at the NAB seems to be mobility—mobile TV, IPTV and Triple and even Quadruple Play—what are your views on what's driving the industry and how is SES Americom positioned to meet the opportunities and challenges of this industry?

It really builds on strength. We've been in the IP business for several years now. We're about to launch IP PRIME for its first market—the telcos. What IP Prime does is much bigger. What it does is that it takes all the video sources from about 15-16 satellites and we format it into MPEG 4, which is intelligent video, ready for the market. In the case of the telco market a stream is 2 MegaBits for standard definition and 8 MegaBits for HD. In the mobile market it can be up to 300 KiloBits stream.

Q. Talk about the HD market—how is your HD prime neighborhood going and has the market met your expectations?

It really has. In our primary HD market, we find ourselves nearly sold out earlier this year. Fortunately, we were able to look ahead a few years ago and we put in the factory our AMC-18 satellite which just came online this past quarter. It's really just-in-time inventory, because you've seen in the market DirecTV announce that it is launching 150 HD channels this year. Nearly every major program provider is launching HD

channels this year. So, we feel that we are in the right place with the right inventory at the right time.

We're very bullish on HD. At SES Americom, we see ourselves as the HD leader bar none. We've got leadership of our HD PRIME satellites across the board. That includes networks like Discovery HD Theater, MTV, Home and Garden HD, Showtime HD, TMC HD and many others. Beyond that in our IP PRIME platform, we have over 18 HD channels already. So, that leadership has really proven out what we have achieved in the last few years. AMC-18 puts in a position to grow that leadership.

Q. How about your Enterprise business. How's that working out for you?

We've been in the enterprise business for over 30 years. We began by creating custom satellite networks for corporations. And we still do that. What we have done is add a layer of IP technology to create semi-custom networks to allow them to plug in and get connectivity and compete and deliver to a wide array of locations at a cost-effective rate. Beyond that, in the reseller market we continue to see a lot of strength. Our IP platforms have what we call VNOs—Virtual Network Operators, and a lot of resellers have signed on to this service and they have seen a lot of demand.

In the consumer broadband market, which also serves the small enterprise market, we continue to see strength. The Ku-Band market is now almost sold out in the US as a result. What we see is a nice trajectory of expansion into Ka-Band services. We now have two Ka-Band payloads in our AMC-15 and 16 satellites which are both fully leased. So, we see a future in Ka-band

as well.

Q. Where do you see the North American broadcasting market going in the near future?

I see it continuing to grow. I think if you look at the broadcasting market in the past 20 years, there's been waves of innovation—it's not a steady stream. The first wave of innovation was from analog to digital in the early 90s. That wave jumpstarted when MPEG 2 became common technology in the mid-90s. At that time we saw all the major channel launch new digital suites. So they went from one or two channels to 10-12 channels. What we are seeing with MPEG 4 is a doubling of capacity within a whole new market segment—the telcos. To serve that market segment, all the major program providers are launching new channels. So once again we see a new entrant—the telcos, as opposed to DBS in the 90s; a new technology—MPEG 4 as opposed to MPEG 2 then, and a new wave of channel innovation—and that's what's happening now.

Q. Finally, if we do this interview again in two years, where do you see SES Americom?

A. I see us as the pre-eminent leader in the satellite business and the pre-eminent leader in the transport of content to various markets and leading the way in IP solutions. **SM**

To view the entire interview online go to:

www.satnews.com/satvideo

MARKET INTELLIGENCE



Energy & Communications: Imperatives & Solutions – “Take 2”

BY MARTIN JARROLD

Chief, International Program Development, GVF
& Chair, Oil & Gas Communications: North Africa and the Middle East Conference 2007
www.gvf-events.org

The World Economic Forum (WEF) recently published its latest *Global Information Technology Report (GITR)*, providing an assessment of the impact of information and communication technology (ICT) on economic development processes and relative business competitiveness of many nations around the world, including in the Middle East and North Africa (MENA) region.

Included in the GITR is the ‘*Networked Readiness Index*’ (NRI). This Index is a measure of the propensity of countries to leverage the opportunities offered by ICT for development and for increased industrial/commercial competitiveness, and it establishes a broad international framework to map out the enabling factors of such capacity.

Preparedness to use ICT effectively is measured in the GITR in terms of three dimensions:

- *The general business, regulatory and infrastructure environment for ICT;*
- *The readiness of the key stakeholders - individuals, businesses and governments – to use and benefit from ICT;*
- *Their actual usage of the latest information and communication technology available.*

Analysis of the MENA region shows that Tunisia (35th in the NRI rankings), Morocco (76th) and Algeria (80th) have all improved their networked readiness from last year while, in contrast, Egypt is down 14 places to 77th position. The Gulf countries, except for Kuwait which is down 8 positions to 54th this year, remain rather stable in comparison to last year, with the United Arab Emirates (UAE) leading the region at 29th in the NRI rankings. Indeed, the UAE has been placing a growing emphasis on the role of ICT in recent years, with the launch of a number of ICT initiatives.

The timely publication of this analysis occurs just as we go through the period of build-up to a high-level conference networking forum of communications industry leaders and oil & gas industry executives which will take place at the **GVF Oil & Gas Communications: North Africa and the Middle East Conference 2007** over the period 29th to 31st May (please note these revised dates) at the Intercontinental City Stars Hotel, Heliopolis, Cairo, Egypt.

The oil & gas exploration & production sectors will continue for



some time to call upon the telecommunications industry to provide and deploy the most cost-effective and reliable applications solutions all around the world, and the objectives of this, the 2nd Annual Conference, include the creation of a further opportunity to extend dialog between the two industries to advance the provision of ICT applications for the Exploration & Production segments of the energy sector in the MENA region.

For the 2007 Conference, GVF has developed an exciting, expanded, and regionally-focused conference program for this important vertical market, a program developed from key principles elaborated in the Conference Mission Statement:

- “Nowhere are the facts of

MARKET INTELLIGENCE

vertical market ICT requirements more evident than in the oil & gas exploitation environment. Satellite-based communications, together with satellite-terrestrial hybrid solutions, already play a vital role within this sector, providing essential connectivity in challenging geographic environments and other physical circumstances, but it is a role which nevertheless has both demand-side and supply-side potential to expand – and expand significantly.”

• “This Conference will bring together key leaders and experts from the oil & gas sector as well as the communications industry into one high-level discussion and networking forum. In so doing, the conference will create opportunities for companies in this major global vertical to call upon ICT solutions providers – whether based on terrestrial wireline or wireless, or satellite – to match their offerings more closely to the specific demands and requirements of the ‘oil & gas patch’.”

Guided by these principles, this platform will bring together representatives of both sides of the communications supply profile and the communications demand profile equation. Although the following lists are by no means exhaustive, the two sides of this equation can be understood as being in the form, respectively, of:

- Telecoms Operators
- Telecoms OEMs
- Solutions Providers
- Systems Integrators
- Telecoms and Systems Consultants

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- ISPs

And:

- **International Petroleum Corporations**
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- **International / NOC JVs**
- **Oilfield Services Companies**

In achieving these various objectives, the organizers at GVF and UK-EMP are very pleased to welcome the invaluable help of the following organizations as the sponsors of the event (list correct as at 26th April):

- **Schlumberger (Principal Sponsor)**
- **Ericsson**
- **Alkan Telecom**
- **Hughes Network Systems**
- **Hermes**

Prior to the commencement of the Conference on 30th May, there will take place on 29th May a *Technology Open Day*. The objective of this pre-Conference *Technology Open Day* is to offer a value-added opportunity to focus on the current technology and service solutions that are available for the oil & gas vertical market. Through the facility of the *Open Day*, Schlumberger – as principal sponsor of the event – will offer an opportunity for oil & gas sector representatives to develop a more comprehensive understanding of the design of satellite networks, the various technology choices inherent in those designs, and the add-ons which have become increasingly critical in today's operational environment, e.g., out-of-band connectivity, disaster recovery, remote configuration and monitoring. Aspects of the network design process to be featured on 29th May will include:

- First mile content and data capture, security & transmission;
- E & P software packages ;
- Network technologies & topologies ;
- New developments to vital components of the link budget;
- Hardware technology advances;
- Out-of-band control, monitoring & redundancy;
- Disaster recovery systems;
- Licensing issues & other considerations.

Discussion facilitated by the Technology Open Day will, quite naturally, flow through into the business of the Conference itself, the program for which was touched upon in this column a few months ago, and which can now be seen at the event-dedicated website at www.gvf-events.org

In brief, the main Conference proceedings will take place as a series of eight distinctly themed **'InterActive' Panels**, as follows:

Conference Day One, 30th May:

- **'InterActive' Panel 1**
Applications Evolution and the Dynamics of Oil & Gas Networking Communications.

- **'InterActive' Panel 2**
Bandwidth Supply/Bandwidth Demand: Optimising Price, Quality and Reliability Variables in Oil & Gas Communications

- **'InterActive' Panel 3**
Oil & Gas Networking Innovation: Satellite and the Hybridisation of the Wide Area Seamless Solution

- **'InterActive' Panel 4**
Communications Regulation and Vertical Market Growth Maximisation

Conference Day Two, 31st May:

- **'InterActive' Panel 5**
"Future Evolution": Advancing the Dynamics of the IP-Based Communications Solution.

- **'InterActive' Panel 6**
Maintaining the Mission Critical Link: Oil & Gas Communications When Disaster Strikes

- **'InterActive' Panel 7**
Oil & Gas ICT: Mitigating the Resource "Exploitation" Tag

- **'InterActive' Panel 8**
Collaborative Oil & Gas Communications: Sharing the Benefits

For further information, please contact me at martin.jarrold@gvf.org or go to the Conference website at www.gvf-events.org.



Martin Jarrold is the Director, International Programs of the Global VSAT Forum. He can be reached at martin.jarrold@gvf.org For more information on the GVF go to www.gvf.org

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